



C4P-SA12031A00

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Note | Resolution | Scanning range | Protective field height | System part | Type | Part no. |
|---|------------|----------------|-------------------------|-------------|----------------|----------|
| The system plug has to be ordered separately. For details, see "Accessories". The system plug has to be ordered separately. For details, see "Accessories". | 30 mm | 30 m | 1,200 mm | Sender | C4P-SA12031A00 | 1220129 |

The system plug has to be ordered separately. For details, see "Accessories".

Other models and accessories → www.sick.com/deTec



Detailed technical data

Features

| | |
|---------------------------------------|-------------------------------|
| Product version | deTec4 |
| Application | Normal industrial environment |
| System part | Sender |
| Resolution | 30 mm |
| Scanning range | 30 m |
| Protective field height | 1,200 mm |
| No blind zones | Yes |
| Synchronization | Optical synchronization |
| Integrated laser alignment aid | ✓ |
| Items supplied | Sender |

Safety-related parameters

| | |
|---|--------------------------|
| Type | Type 4 (IEC 61496-1) |
| Safety integrity level | SIL 3 (IEC 61508) |
| Category | Category 4 (ISO 13849-1) |
| Performance level | PL e (ISO 13849-1) |
| PFH_D (mean probability of a dangerous failure per hour) | |
| Single device | 15.3 x 10 ⁻⁹ |
| Cascade with one guest | 30.5 x 10 ⁻⁹ |

| | |
|---|--|
| Cascade with two guest devices | 45.6 x 10 ⁻⁹ |
| T_M (mission time) | 20 years (ISO 13849-1) |
| Safe state in the event of a fault | At least one OSSD is in the OFF state. |

Functions

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|--|---|
| Protective operation | ✓ |
| Automatic calibration of the protective field width | ✓ |
| Beam coding | ✓ |
| Cascading | ✓ |

Interfaces

| | |
|-----------------------------|---|
| System connection | Depending on system plug (M12 male connector, 5-pin or 8-pin) |
| Extension connection | Depending on system plug (without extension connection or with M12 female connector, 5-pin) |
| Configuration method | DIP switch on system plug |
| Display elements | LEDs |

Electronics

| | |
|-------------------------------------|-----------------------------|
| Protection class | III (IEC 61140) |
| Supply voltage V_S | 24 V DC (19.2 V ... 28.8 V) |
| Ripple | ≤ 10 % |
| Power consumption typical | 1.68 W (DC) |

Mechanics

| | |
|-------------------------|---------------------------|
| Dimensions | See dimensional drawing |
| Housing material | Aluminum extruded profile |

Ambient data

| | |
|--------------------------------------|---|
| Enclosure rating | IP65 (IEC 60529) IP67 (IEC 60529) |
| Ambient operating temperature | -30 °C ... +55 °C |
| Storage temperature | -30 °C ... +70 °C |
| Air humidity | 15 % ... 95 %, Non-condensing |
| Vibration resistance | 5 ... 150 Hz, 3,5 mm / 1 g (EN 60068-2-6) |
| Shock resistance | 15 g / 6 ms (EN 60068-2-27) |
| Class | 3M4 (IEC TR 60721-4-3) |

Other information

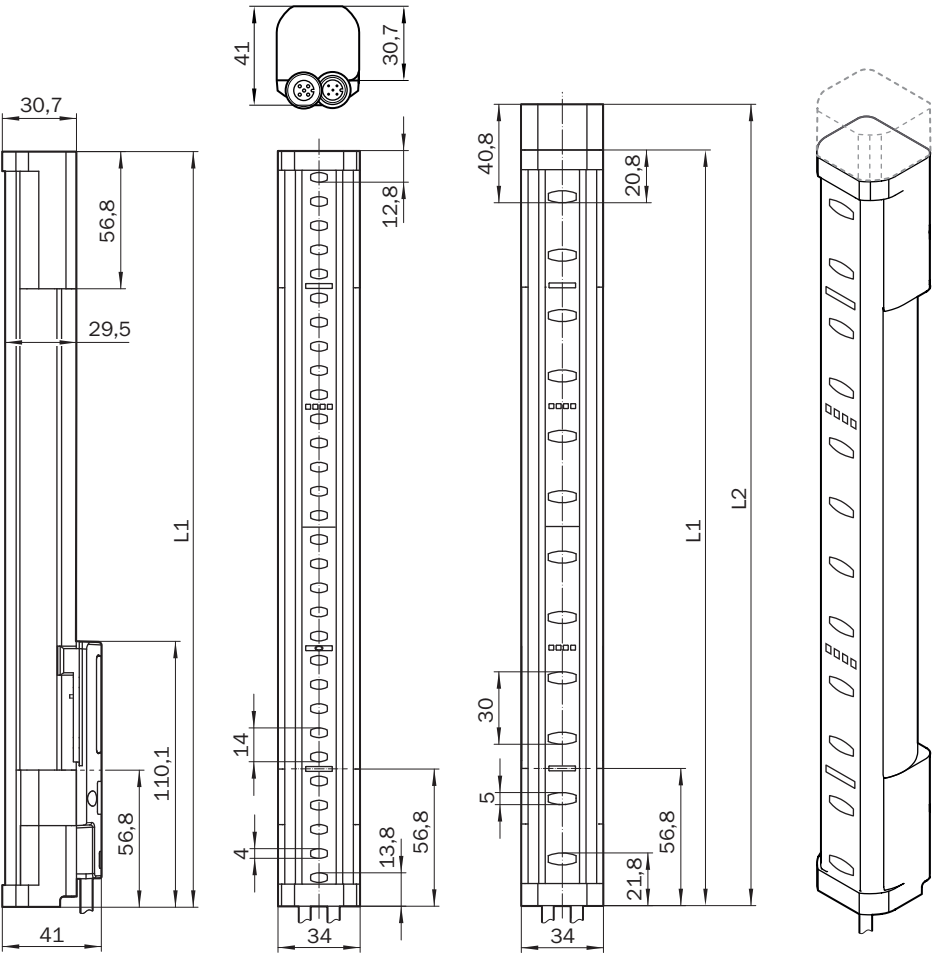
| | |
|---------------------------------------|--------------------------------|
| Wave length | 850 nm |
| Type of light | Near-infrared (NIR), invisible |
| Integrated laser alignment aid | ✓ |
| Laser class | 1 |
| Wave length | 650 nm |
| Type of light | Visible red light |

Classifications

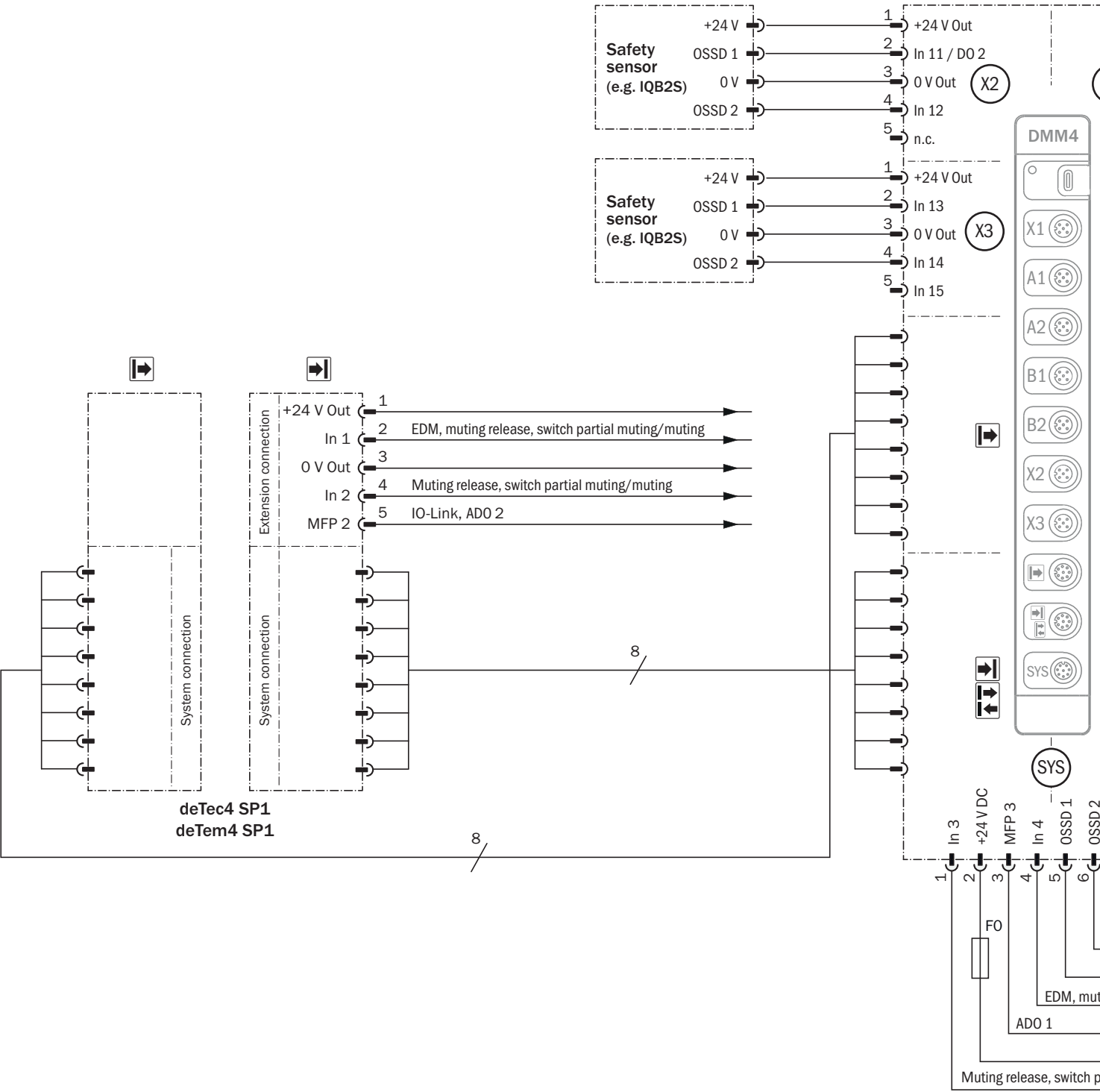
| | |
|---------------------|----------|
| ECLASS 5.0 | 27272704 |
| ECLASS 5.1.4 | 27272704 |

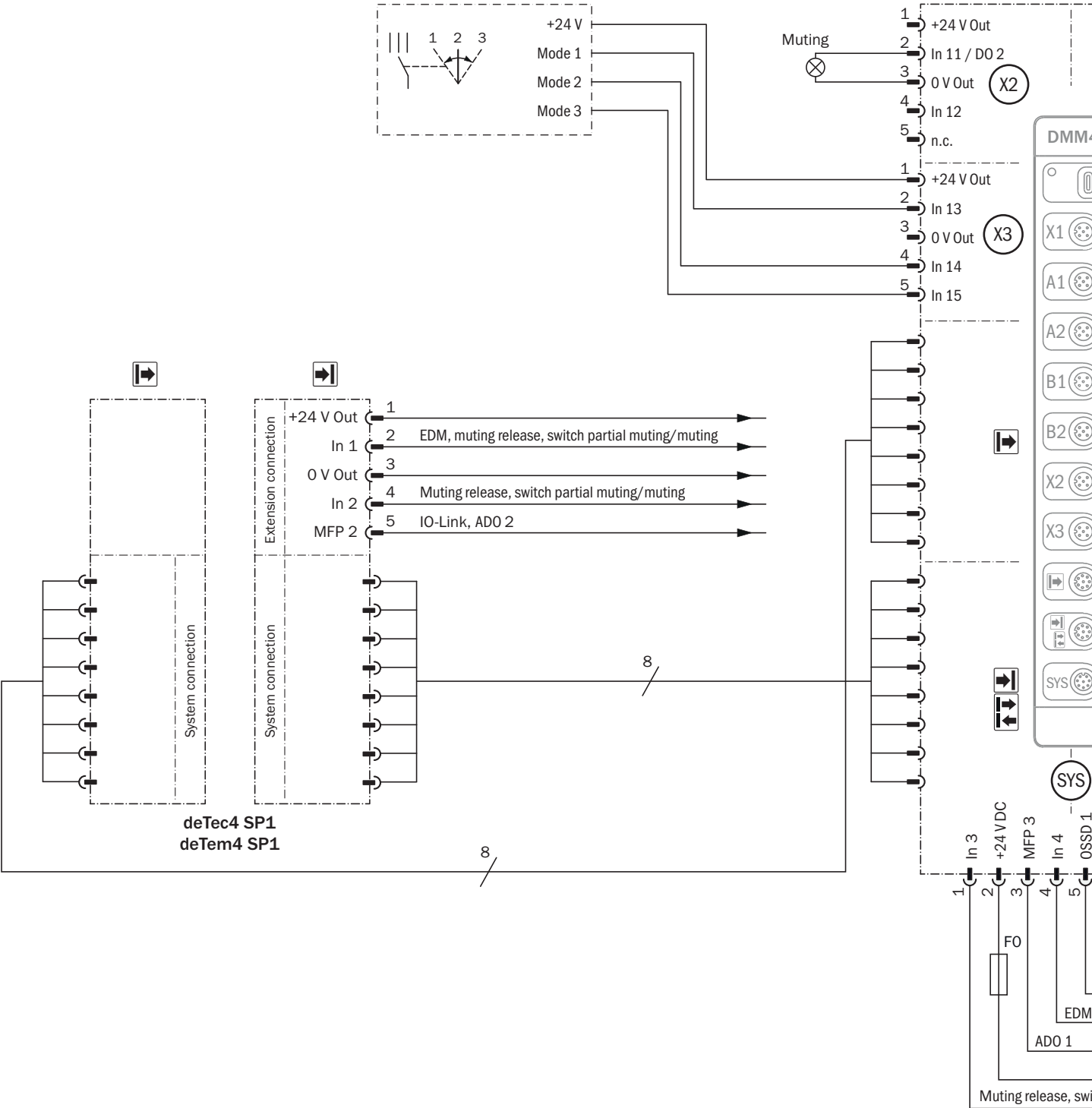
| | |
|----------------|----------|
| ECLASS 6.0 | 27272704 |
| ECLASS 6.2 | 27272704 |
| ECLASS 7.0 | 27272704 |
| ECLASS 8.0 | 27272704 |
| ECLASS 8.1 | 27272704 |
| ECLASS 9.0 | 27272704 |
| ECLASS 10.0 | 27272704 |
| ECLASS 11.0 | 27272704 |
| ECLASS 12.0 | 27272704 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| ETIM 8.0 | EC002549 |
| UNSPSC 16.0901 | 46171620 |

Dimensional drawing (Dimensions in mm (inch))



Connection diagram












Recommended accessories


Other models and accessories → www.sick.com/deTec

| | Brief description | Type | Part no. |
|---|---|--------------------------------|----------|
| Connection modules | | | |
|  | IOLA2US-01101 (SiLink2 Master) | IOLA2US-01101 (SiLink2 Master) | 1061790 |
|  | <ul style="list-style-type: none"> Description: Connector for connecting an IO-Link master and up to 2 muting sensors to a safety light curtain or a multiple light beam safety device | IO-Link connector | 2092757 |
|  | <ul style="list-style-type: none"> Description: Connector for connecting 2 muting sensors and a muting lamp to a safety light curtain or a multiple light beam safety device | Muting connector | 2092758 |
| Terminal and alignment brackets | | | |
|  | <ul style="list-style-type: none"> Description: FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned $\pm 15^\circ$, including M5 screw Material: Plastic Details: Plastic Packing unit: 4 pieces | BEF-1SHABPKU4 | 2066614 |
|  | <ul style="list-style-type: none"> Description: Sensor bracket G6 and P250 | BEF-2KHAAKU1 | 2113145 |
|  | <ul style="list-style-type: none"> Description: QuickFix bracket for 2 devices (e.g. sender and receiver) Material: Plastic Details: Plastic Packing unit: 4 pieces | BEF-3SHABPKU4 | 2098710 |
|  | <ul style="list-style-type: none"> Description: Universal holder for round steel arms and muting arms, for mounting sensors or reflectors | BEF-KHS-N01 | 2044953 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, A-coded Connection type head B: Male connector, M12, 5-pin, A-coded Connection type head C: Female connector, M12, 5-pin, A-coded Description: T-piece for simultaneous connection to sender and receiver, splits the cable from the control cabinet to the sender and receiver Note: 5-pin | DSC-1205T000025KM0 | 6030664 |
|  | <ul style="list-style-type: none"> Function range: SP1 System connection: Male connector M12, 5-pin Extension connection: Without extension connection | SP1-1000 | 2076832 |
|  | <ul style="list-style-type: none"> Function range: SP1 System connection: Male connector M12, 5-pin Extension connection: Female connector M12, 5-pin | SP1-1100 | 2076833 |
|  | <ul style="list-style-type: none"> Function range: SP1 System connection: Male connector M12, 8-pin Extension connection: Without extension connection | SP1-1200 | 2076834 |
|  | <ul style="list-style-type: none"> Function range: SP1 System connection: Male connector M12, 8-pin Extension connection: Female connector M12, 5-pin | SP1-1300 | 2076835 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, A-coded Connection type head B: Female connector, M12, 8-pin, A-coded Connection type head C: Male connector, M12, 8-pin, A-coded Description: T-distributor for simultaneous connection to sender and receiver, splits the cable from the control cabinet between the sender and receiver Note: 8-pin | DSC-1208T000025KM0 | 6058647 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-020UB5XLEAX | 2095617 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-050UB5XLEAX | 2095618 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-100UB5XLEAX | 2095619 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-050UA5XLEAX | 2095653 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-100UA5XLEAX | 2095654 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-020UB5M2A15 | 2096009 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-050UB5M2A15 | 2096010 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 10 m, 5-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A15-100UB5M2A15 | 2096011 |

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Male connector, M12, 8-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 2 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-020UA5M2A18 | 2096033 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Male connector, M12, 8-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 5 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-050UA5M2A18 | 2096034 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Male connector, M12, 8-pin, straight, A-coded Signal type: Sensor/actuator cable Cable: 10 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-100UA5M2A18 | 2096035 |
|  | <ul style="list-style-type: none"> Product family: Muting arms Description: Muting arm bracket for deTec safety light curtain or deTem safety multi-beam sensor Packing unit: 1 piece Suitable for: deTec, deTem | Muting arm bracket | 2106455 |
|  | <ul style="list-style-type: none"> Product family: Muting arms Description: Muting arm, short Suitable for: deTec, deTem | Muting arm, short | 2111924 |
|  | <ul style="list-style-type: none"> Product family: Muting arms Description: Muting arm, long Suitable for: deTec, deTem | Muting arm, long | 2111923 |
|  | <ul style="list-style-type: none"> Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C ... +65 °C | P250 | 5304812 |
|  | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 8-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 8-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A18-020UA5XLEAX | 2095652 |

Photoelectric sensors

| | | | |
|---|---|--------------|---------|
|  | <ul style="list-style-type: none"> Sensing range max.: 0.15 m ... 12 m 0.15 m ... 10 m Functional principle: Photoelectric retro-reflective sensor Functional principle detail: With minimum distance to reflector (dual lens system) Switching output: PNP Switching mode: Light/dark switching Connection type: Male connector M12, 4-pin Light source: PinPoint LED Adjustment: None | GL10-P4151 | 1069860 |
| | <ul style="list-style-type: none"> Sensing range max.: 0.03 m ... 6 m Functional principle: Photoelectric retro-reflective sensor Connection type: Cable with M12 male connector, 4-pin Type of light: Visible red light Adjustment: Potentiometer Housing: Rectangular | GL6-P0211S49 | 1070568 |

| | Brief description | Type | Part no. |
|---|---|----------------|----------|
|  | <ul style="list-style-type: none"> • Sensing range max.: 20 mm ... 950 mm • Functional principle: Photoelectric proximity sensor • Functional principle detail: Background suppression • Switching output: PNP • Switching mode: Light switching • Connection type: Male connector M12, 4-pin • Light source: PinPoint LED • Adjustment: Potentiometer | GTB10-P4411S01 | 1066852 |
| | <ul style="list-style-type: none"> • Sensing range max.: 5 mm ... 500 mm • Functional principle: Photoelectric proximity sensor • Connection type: Cable with M12 male connector, 4-pin, 300 mm • Type of light: Infrared light • Adjustment: Potentiometer • Housing: Rectangular | GTB6-P7441S56 | 1077541 |
| Safety switching amplifier | | | |
|  | <ul style="list-style-type: none"> • Applications: Output expansion module for OSSDs • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: no • External device monitoring (EDM): Via path • Outputs: 2 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe) • Housing width: 18 mm | RLY3-OSSD100 | 1085343 |
|  | <ul style="list-style-type: none"> • Applications: Output expansion module for OSSDs • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: no • External device monitoring (EDM): Via path • Outputs: 4 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe), 1 signaling current path (not safe) • Housing width: 28 mm | RLY3-OSSD400 | 1099971 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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